place in "Terms folder"
for VIII.

NEW

U N I T E D   S T A T E S   I N T E L L I G E N C E   B O A R D

COMMITTEE ON DOCUMENTATION

Task Team VIII - Photo Chip

GUIDANCE FOR RESEARCH AND REPORTING

DEFINITION OF TERMS

1. Photographic information is considered, for this Task Team's work, to include all images of all kinds of information on all kinds of materials.

2. Photo Chip, for the general purposes of this Task Team's investigation, is considered to be any photographic multi sensor image of any generation of any material that is not a part of a film or print strip. (See forenote, page 3.)

> NOTE - Definitions herein used are cast in broad terms to assure (a) the most thorough and comprehensive examination of the various factors bearing on the problem of Photo Chip standardization, (b) the fullest freedom in ultimately determining those definitions necessary to satisfy the charter of the Task Team.

NOTE BENE

"Task Team VIII will study, as far as possible, all current technology as regards the reduction of intelligence and other data to film or transparent base for the purpose of exchange, storage and retrieval. Our goal is to recommend to CODIB the most effective and economical means of exchanging, storing and retrieving photography (primarily aerial, but including multi-sensor imagery) for all organizations/agencies falling within the purvue of USIB."

CONTEXT

USIB Charge to CODIB......."develop a standard Photo Chip, exploring the feasibility of adopting the recently developed DoD standard." [1]

NOTE - Initial inquiry by the Task Team indicates that the ISCIG [2] report from which the DoD "standard" was evolved has not yet been officially adopted or implemented. Moreover, it is the understanding of the Task Team that the ISCIG study concentrated on the operating problems of the services, and that it operated at the SECRET level. The CODIB Photo Chip inquiry will operate at all necessary classification levels and will examine all aspects of the strategic and tactical intelligence cycles, i.e., collection, production, analysis, storage and retrieval, exchange, with particular reference to the needs of the Intelligence Community and to the efficiency and effectiveness of the Community's information processing system.

SCIPS Recommendation [3] "........including standardized indexing of photographic materials......reduction of tremendous volume of film presently being distributed......standardized film chips and related equipment for storing, retrieving, interpreting and duplicating photography.......standard reporting techniques and formats......techniques for more successful integration of all photographic materials......techniques for getting photo-derived information to users in quickest possible time......"

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[1] Directed by USIB, 29 April 1964, USIB-M-322.

[2] Special ISCIG Committee for Standardization of Plans and Devices for Storage and Retrieval of Reconnaissance Materials, 10 June 1963.

[3] Staff for the Community Information Processing Stud. (SCIPS) Stage I Report, [   ] 8 November 1963.

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C-O-N-F-I-D-E-N-T-I-A-L

VIII PHOTO CHIP

Develop a standard photographic chip system for exchange,
storage and retrieval of aerial photography, exploring the feasibility
of adopting the recently-developed DoD standard for use throughout the
Intelligence Community.

C-O-N-F-I-D-E-N-T-I-A-L

FORENOTE

The Task Team notes that several forms of chipped information have developed over the past several years, that the use of these forms cut across functional lines in intelligence, and that these forms are used to store both imagery of physical objects and textual data. While it is not possible at
5   this juncture to separate out clearly these forms and applications by intelligence function or by physical characteristics, the following list is provided for general guidance of those participating in the inquiry:

a. Operational Data Base, i.e., the IOIS (Navy ship born operational support system)

10   b. General Analytic Data Base, i.e., CIA/NPIC source development and production; SAC target analysis effort; CIA/RR general economic analysis

c. General Reference Data Base, i.e., research in depth in both photography and related textual materials, stored in
15   systems, such as, minicard, FMA (35mm) Micro-Fische applications.

OPERATING OBJECTIVES OF THE TASK TEAM

1. To assess the present and potential value of Photo Chip standard-ization to the Intelligence Community in providing support to national defense and to US foreign policy;

5   2. To formulate ways and means for the Intelligence Community to improve the exploitation, exchange and use of imagery data, both in single-source and all-source production, with particular reference to reconnaissance materials; and,

3. To appraise the impact of the foregoing on:

    a. the quality, timeliness and relevance of both single-
10 source and all-source production in the Intelligence Community;

    b. the effectiveness and efficiency of the Intelligence Community's information processing system; and,

    c. the procedures and organization of those presently concerned with the collection, production, use and control of
15 photographic materials (multi-sensor imagery), especially those derived from aerial reconnaissance.

TERMS OF REFERENCE

NOTE - The terms block off major areas of concern to the Task Teams inquiry with questions under each major heading designed to open avenues of particular interest to the general Photo Chip problem. They are not intended to constrain in any way either the Task Team's inquiry or its report to CODIB.

I. General Identification of the existing Photographic Information (multi-sensor imagery) collection, processing and using systems at the National, Departmental and Operational levels.

Questions - What are the names, ages, and general functions of the various systems? Which ones are located within the Intelligence Community? Outside the Community? What are the operating relationships between the group within the Community and the group outside? What are the interface relationships among those systems within the Community? Among those outside? What are the major uses made of photographic information--by the collector/processors? By the single-source producers? By the multi-source producers? By the users of various intelligence end products? By others?

II. Identification and description of existing Photo Chip systems at the National, Departmental and Operational level.

Questions - What is the name, age and general function of each system? At what level or levels does it function? And, what are its production and functional responsibilities? How has each system worked over the past few years, and what are its prospects over the immediate and medium-term future? What are the present interface relationships among the various Photo Chip systems and with other intelligence information systems; and what are these likely to be in the future? What are the major uses made of Photo Chip systems? By the processor/producers? By the single-source producers? Multiple-source producers? By users of all various intelligence end products?

III. Present and Prospective Intelligence Requirements for photographic information and Photo Chips at the National, Departmental and Operational level.

Questions - What are the needs of various users, both present and potential, for photographic information (imagery data) in general? What are the present and potential requirements for photographic information in Photo Chip form? What are the varying requirements for technical characteristics of any Photo Chip systems, such as, minimums and maximums for

SECRET

systems scales, installation area size, quality and the like? What are the critical differences (to intelligence users) in these areas, and the reasons therefor? What are the advantages, disadvantages, of the Photo Chip form? Photo Chip standardization? Where are Chips presently made? What is their distribution and use? How, where, and to what benefit could chipping lead to expanded use of photographic information.

IV. Exploitation Policy and Procedures for Photographic Information (imagery data).

Questions - What has been the general trend in the use of photographic information (imagery data) with emphasis on reconnaissance photography? What has been the general policy on the collection, control, dissemination and use of photographic information of various kinds, especially in regard to reconnaissance photography? How has this affected its usefulness? What are the trends in these regards, and how might the possible broader use of reconnaissance materials bear on both technical characteristics of Photo Chip standardization and future policies regarding dissemination and use? What are the problems and concerns of general all-source analytic offices as distinct from processor/producers and special (single) source or single-purpose producers? What are the present means for making strategic photographic information (imagery data) available to general analysts and users? How adequate are these in terms of both present and prospective user needs? What means would be most effective in bringing these latter considerations to bear on Task Team deliberations?

V. Possible benefits from Photo Chip Standardization.

Questions (content value and use) - What changes might occur in quality of photographic information (imagery data) in Photo Chip form? How might the dissemination, exchange and timeliness of photographic information (imagery data) be affected by Photo Chip standardization? How might Photo Chip standardization affect the extent of use for intelligence purposes. For other purposes? In what areas are we most likely to realize advantages from the more extensive use of Chipped photographic information (imagery data) and as a part of the Community all-source analytic and production effort?

Questions (efficiency-economy) - To what extent might we expect a Photo Chip standardization to lead to improvement in the overall effectiveness and efficiency of the Community intelligence effort? Where might these improvements occur? For what reasons? In what forms might these become evident? Money savings? Manpower savings? Greater productivity for the same cost?

Questions (countervailing impacts) - What might be the countervailing considerations of Photo Chip standardization? Added cost for chip production, dissemination, use? Added cost from broader use of chipped photographic information? From more intensive use? What other difficulties might arise in development of Photo Chip standardization? How would the foregoing appear over the short-term? The long-term?

VI. Constraining Factors.

Questions (Technology) - What constraints might be encountered in present technology affecting collection, processing, distribution and use of photographic information carried in Photo Chip form? Where are the most critical constraining points likely to be found? What is the impact of each constraining point on the coverage, quality, timeliness and general availability of photographic information to the Intelligence Community? How do the foregoing bear on Photo Chip standardization? Size? Form? Handling? Hardware? What are the trends in technology affecting the foregoing generally? What would be the impact of advancing technology on each of the constraint points? When might these occur?

Questions (Policy, Security, Customs, Organization Structure, Exploitation Capability) - In what ways might any of these affect the collection, processing, distribution and use of photographic information (imagery data) in Photo Chip form? For example, how might the present organizational structure of the Community affect the cost and utility of Photo Chip standardization?

Questions (Chemistry) - What are the constraints of present chemistry on the quality of photographic information, especially reconnaissance photography? How does this bear on the size and form of a Photo Chip? On the content value? On 2nd and 3rd, etc., generation? Quality and generation file utility? What are the trends in chemistry related to photographic storage of information? What might be the timing and nature of future improvements? Mono? Sterio? Color? Black-White?